AMENDMENTS

Please amend the application as indicated hereafter.

To the Claims

1. (currently amended) A multi-memory architecture ~~with an externally accessible storage capacity known as a total memory capacity and a number of pins of the multi-memory architecture having the total memory capacity known as a total pin number, wherein the total pin number comprises used and unused pins~~, ~~the multi-memory architecture~~ comprising:

a first type ~~non-volatile~~ memory ~~device having a first data storage capacity and a first predefined pin configuration having a first number of pins which is an actual number of used pins according to the first data storage capacity~~; and

a second type ~~non-volatile~~ memory ~~device having a second data storage capacity and a second predefined pin configuration having a second number of pins which is an actual number of pins according to the second data storage capacity~~;

wherein ~~the first number of pins is greater than the second number of pins, the total pin number of the multi-memory architecture is equal to the number of pins of the first type non-volatile memory device of the multi-memory architecture~~ the multi-memory architecture has a pin configuration same as that of the first type memory, and the first type ~~non-volatile~~ memory ~~device~~ and the second type ~~non-volatile~~ memory ~~device~~ are disposed in the multi-memory architecture ~~at the same time~~ simultaneously.

Claim 2. (canceled)

3. (currently amended) The multi-memory architecture of claim 1, wherein the

second type ~~non-volatile~~ memory ~~device~~ comprises a plurality of segments ~~and each segment has a data storage capacity equal to the first data storage capacity~~; wherein storage space of the first type ~~non-volatile~~ memory ~~device~~ is used to replace one of the segments in the second type ~~non-volatile~~ memory ~~device~~ so that an access to the replaced segment is mapped to the storage space of the first type ~~non-volatile~~ memory ~~device~~.

4. (currently amended) The multi-memory architecture of claim 3, wherein the segment in the second type ~~non-volatile~~ memory ~~device~~ that is currently being replaced by the first type ~~non-volatile~~ memory ~~device~~ is used to replace any one of the segments in the second type ~~non-volatile~~ memory ~~device~~ other than the one currently being replaced by the first type ~~non-volatile~~ memory ~~device~~.

5. (currently amended) The multi-memory architecture of claim 3, further comprising: at least one replacement segment in the second type ~~non-volatile~~ memory ~~device, whose data storage capacity equals the data storage capacity of each segment in the second type non-volatile memory device~~, which is used to replace any one of the segments in the second type ~~non-volatile~~ memory ~~device~~ other than the one being currently replaced by the first type ~~non-volatile~~ memory ~~device~~.

6. (currently amended) The multi-memory architecture of claim 1, further comprising a replacement memory area in the second type ~~non-volatile~~ memory ~~device, whose data storage capacity equals the first type non-volatile memory device~~, which is used to replace any one of the segments in the second type ~~non-volatile~~ memory ~~device~~ other than the one being currently replaced by the first type ~~non-volatile~~ memory ~~device~~.

7. (currently amended) The multi-memory architecture of claim 5, wherein one of the at least one replacement segment that is currently being replaced by the first type ~~non-volatile~~ memory ~~device~~, is used to replace any one of the segments in the replacement memory area other than the one currently being replaced by the first type ~~non-volatile~~ memory ~~device~~.

Claims 8-26. (cancelled)